

FOUR NEW SPECIES OF COELOTINE SPIDERS FROM SOUTHERN CHINA (ARANEAE, AMAUROBIIDAE)

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Abstract Four new species of coelotine spiders are reported, they are *Codotes brevis* sp. nov., *Coelotes colosseus* sp. nov., *Codotes processus* sp. nov. and *Coronilla pseudogenata* sp. nov. Detailed descriptions and illustrations of these new species are presented and differences with related species are discussed.

Key words Araneae, Amaurobiidae, Codotinae, *Codotes*, *Coronilla*.

During examination of the coelotine spiders deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS), four coelotine species were found new to science. Descriptions, illustrations and diagnosis of these new species are provided in the current paper.

Abbreviations used in the text and figures including: ALE= anterior lateral eye; AME= anterior median eye; AME-ALE= distance between AME and ALE; AME-AME= distance between AME and AME; ALE-PLE= distance between ALE and PLE; C= conductor; CD= copulatory duct; CDA= conductor dorsal apophysis; CF= cymbial furrow; E= embolus; FD= fertilization duct; LTA= lateral tibial apophysis; MA= median apophysis; PA= patellar apophysis; PLE= posterior lateral eye; PME= posterior median eye; PME-PLE= distance between PME and PLE; PME-PME= distance between PME and PME; RTA= retrolateral tibial apophysis; SB= spermathecal base; SST= spermathecal stalk; ST= subtegulum; T= tegulum; TS= tegular sclerite; TSA= tegular sclerite apophysis. All measurement are given in millimeters. Eye diameters are taken at the widest part. Leg measurement are shown as: total length (femur, patella+ tibia, metatarsus, tarsus). The terms used in the text and figure legends follow Wang (2002). Photos were made with a Sony digital camera (DSG-T33, 5.1 megapixels) mounted on an Olympus SZ40 stereomicroscope.

Codotes brevis sp. nov. (Figs. 1-4, 17-19)

Type material. Holotype male, China, Sichuan, Mianning County, Yihai Town, Yihai (28.7°N, 102.2°E), 20 Oct. 2005, leg. XU Xiang and ZHANG XiuFeng.

Etymology. The specific name is a Latin adjective in apposition, meaning “short” and referring to the short

conductor.

Diagnosis. This species can be easily distinguished from other *Coelotes* by the absence of a lateral tibial apophysis and the absence of a conductor dorsal apophysis.

Description of male. Holotype total length 9.7. Carapace 4.6 long, 3.4 wide; abdomen 5.1 long, 3.1 wide. Eyes measurement: AME 0.25; ALE 0.23; PME 0.20; PLE 0.25; AME-AME 0.08; AME-ALE 0.08; ALE-PLE 0.10; PME-PME 0.18; PME-PLE 0.25; Clypeus 0.25. Leg I longest; leg formula: I, IV, II, III; the measurement of legs is as follows: I: 15.3 (4.0+ 5.4+ 4.0+ 1.9); II: 14.0 (3.5+ 4.9+ 3.8+ 1.8); III: 12.1 (3.3+ 3.8+ 3.4+ 1.6); IV: 14.9 (4.0+ 5.0+ 4.3+ 1.6). Chelicerae with 3 promarginal and 3 retromarginal teeth (Fig. 1). Patellar apophysis short and sharp; retrolateral tibial apophysis (RTA) with distal end slightly extending beyond tibia; lateral tibial apophysis (LTA) absent; cymbial furrow almost half cymbial length; conductor simple and short, with membranous margin; conductor dorsal apophysis absent; conductor lamella small; median apophysis spoon shaped; embolus long, slightly broad, and prolateral in origin (Figs. 2-4, 17-19).

Distribution. China (Sichuan) (Fig. 28).

Coelotes colosseus sp. nov. (Figs 5-9, 20-22)

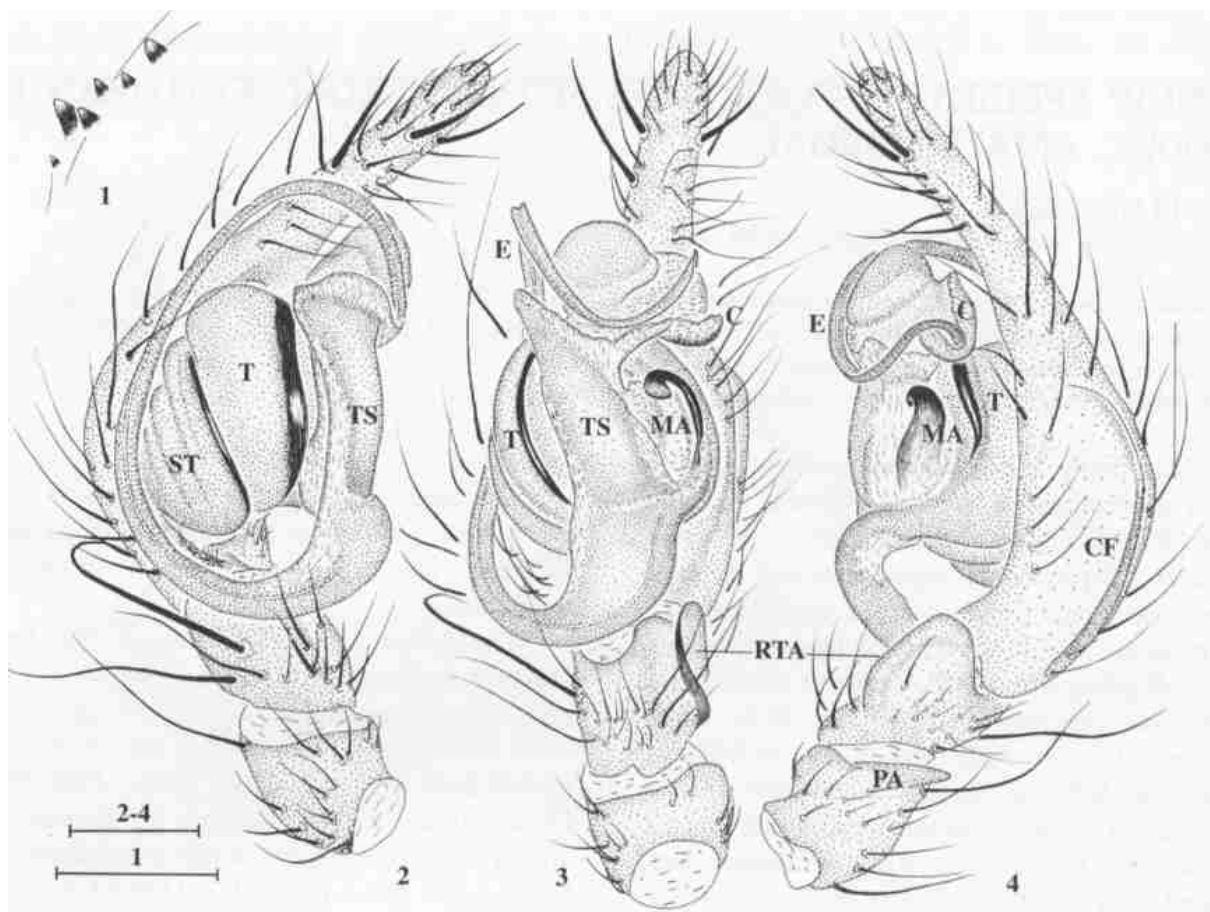
Type material. Holotype male and 2 male paratypes, China, Zhejiang, Hangzhou City (30.2°N, 120.1°E), Zhongshan Park, 14 Oct. 1976, collector unknown.

Etymology. The specific name is derived from the Latin *colossus*, meaning “gigantic”, referring to the gigantic conductor.

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Figs 1-4. *Codotes bravis* sp. nov. 1. Male cheliceral teeth, lateral view. 2. Male palp, prolateral view. 3. Male palp, ventral view. 4. Male palp, retrolateral view. Scale bars= 0.5 mm.

Diagnosis. This species can be easily distinguished from other coelotines by the trifid median apophysis and the strong conductor that is as broad as or broader than embolic base.

Description of male. Holotype total length 10.1. Carapace 5.0 long, 3.3 wide; abdomen 5.1 long, 3.1 wide. Eyes measurement: AME 0.15; ALE 0.24; PME 0.20; PLE 0.24; AME-AME 0.09; AME-ALE 0.08; ALE-PLE 0.05; PME-PME 0.10; PME-PLE 0.24; Clypeus 0.20. Leg IV longest; leg formula: IV, I, II, III; the measurement of legs is as follows: I: 14.7 (4.0+ 5.0+ 3.5+ 2.2); II: 13.0 (3.6+ 4.3+ 3.2+ 1.9); III: 11.7 (3.3+ 3.6+ 3.1+ 1.7); IV: 16.3 (4.3+ 5.1+ 4.7+ 2.2). Chelicerae with 3 promarginal and 2 retromarginal teeth (Fig. 5). Patellar apophysis small, bifurcated; RTA with distal end extending beyond tibia; lateral tibial apophysis large, widely separated from RTA; cymbial furrow short, almost one third cymbial length; conductor simple, as broad as embolic base or broader, and slightly extending posteriorly; conductor dorsal apophysis small; conductor lamella small; median apophysis large, rounded; embolus moderately long, broad, with distal end not sharp, and prolateral in origin (Figs. 6-9, 20-22).

Distribution. China (Zhejiang) (Fig. 28).

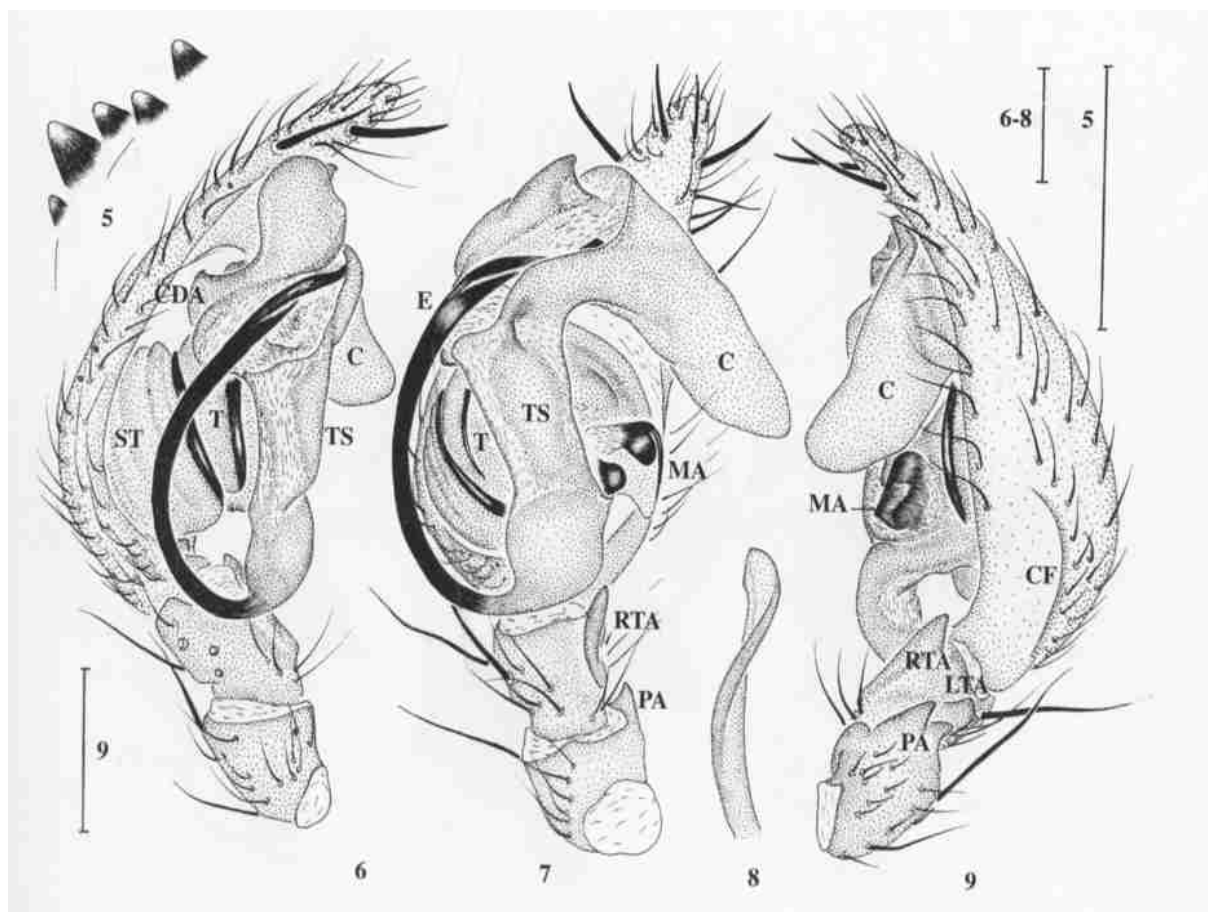
Coelotes processus sp. nov. (Figs. 10-13, 23-25)

Type material. Holotype male, China, Guangxi Zhuang Autonomous Region, Longlin Ge Autonomous County, De'e Town (24.6° N, 105.1° E), 30 Nov. 1998, collector unknown.

Etymology. The specific name is a Latin noun meaning "apophysis", referring to the apophyses on embolus and tegular sclerite.

Diagnosis. This species can be easily recognized from other coelotines by the strongly modified tegular sclerite and embolic base.

Description of male. Holotype total length 9.8. Carapace 5.7 long, 3.9 wide; abdomen 4.1 long, 2.8 wide. Eyes measurement: AME 0.20; ALE 0.30; PME 0.28; PLE 0.28; AME-AME 0.08; AME-ALE 0.10; ALE-PLE 0.08; PME-PME 0.05; PME-PLE 0.30; Clypeus 0.15. Leg IV longest; leg formula: IV, I, II, III; the measurement of legs is as follows: I: 14.5 (4.0+ 5.0+ 3.6+ 1.9); II: 12.2 (3.6+ 3.9+ 3.1+ 1.6); III: 10.3 (2.8+ 3.4+ 2.9+ 1.2); IV: 15.1 (4.1+ 5.0+ 4.2+ 1.8). Chelicerae with 3 promarginal and 2 retromarginal teeth (Fig. 10). Patellar apophysis short, blunt; RTA with distal end slightly extending beyond tibia; lateral tibial apophysis large, situated close to RTA; cymbial furrow almost half cymbial length;



Figs 5-9 *Codotes colosaeus* sp. nov. 5. Male cheliceral teeth, lateral view. 6. Male palp, prolateral view. 7. Male palp, ventral view. 8. Male palp, retrolateral view. 9. Embolus, distal end. Scale bars= 0.5 mm.

cymbium with narrow distal end; tegular sclerite (TS) extending transversally; there is a small, strongly pointed apophysis (TSA) between tegular sclerite and embolic base and another broad, long one between embolus and embolic base; conductor strongly curved dorsally; conductor dorsal apophysis present; conductor lamella large, modified and forming a membranous concavity enclosing the distal end of embolus; median apophysis moderately large; embolus long, prolateral in origin (Figs. 11-13, 23-25).

Distribution. China (Guangxi) (Fig. 28).

Coronilla pseudogemata sp. nov. (Figs. 14-16, 26-27)

Type material. Holotype female, China, Sichuan, Baoxing County, Fengtongzhai Natural Reserve, Dashuigou Valley (30.6°N, 102.9°E), 26 Sep. 2005, leg. XU Xiang and ZHANG Xiufeng.

Etymology. The specific name derived from compound word with the prefix "pseudo" and the specific name of *Coronilla gemata*, Wang, 1994 that is the type species of *Coronilla*.

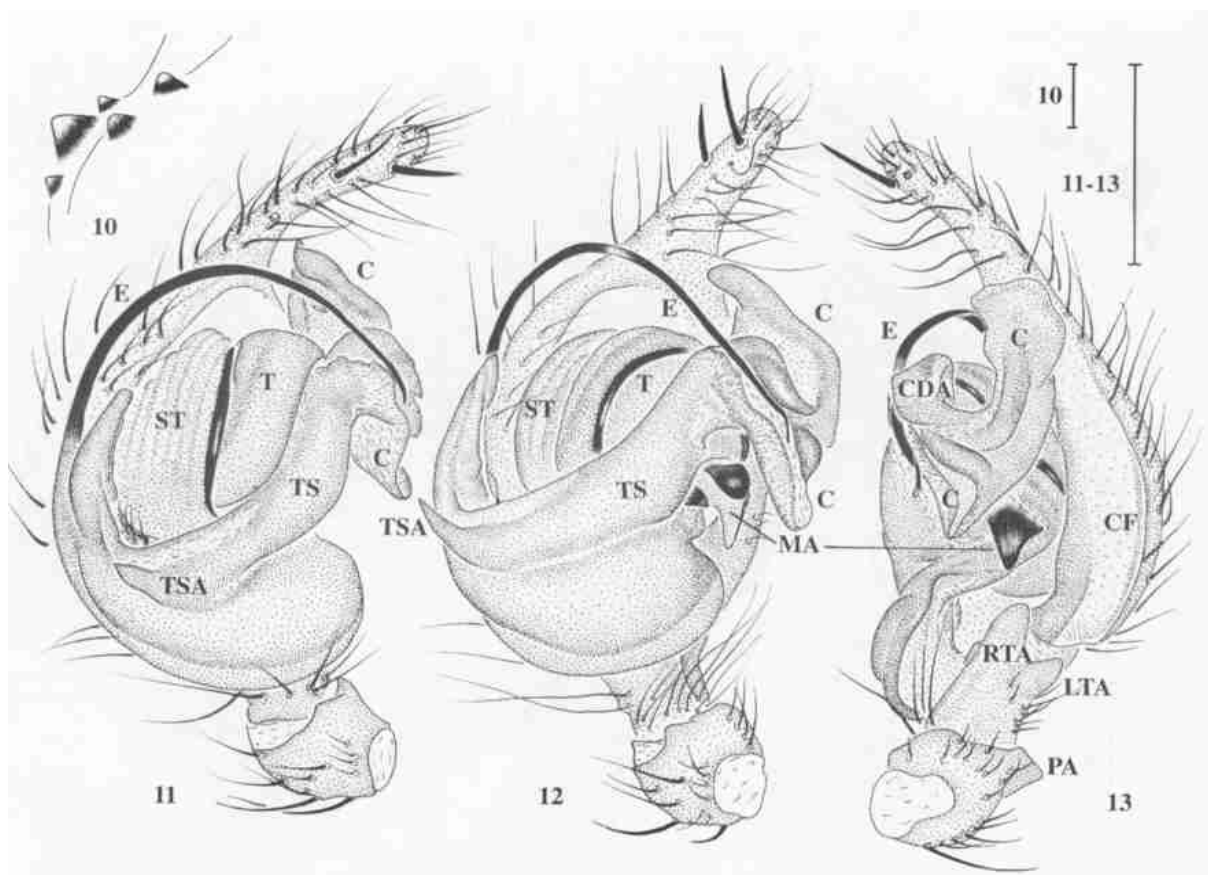
Diagnosis. This species is similar to *C. gemata* in the shape of the epigynum and the spermathecal base, but can be distinguished by the widely separated spermathecal heads and spermathecal stalks (lacks lateral

apophyses in this new species).

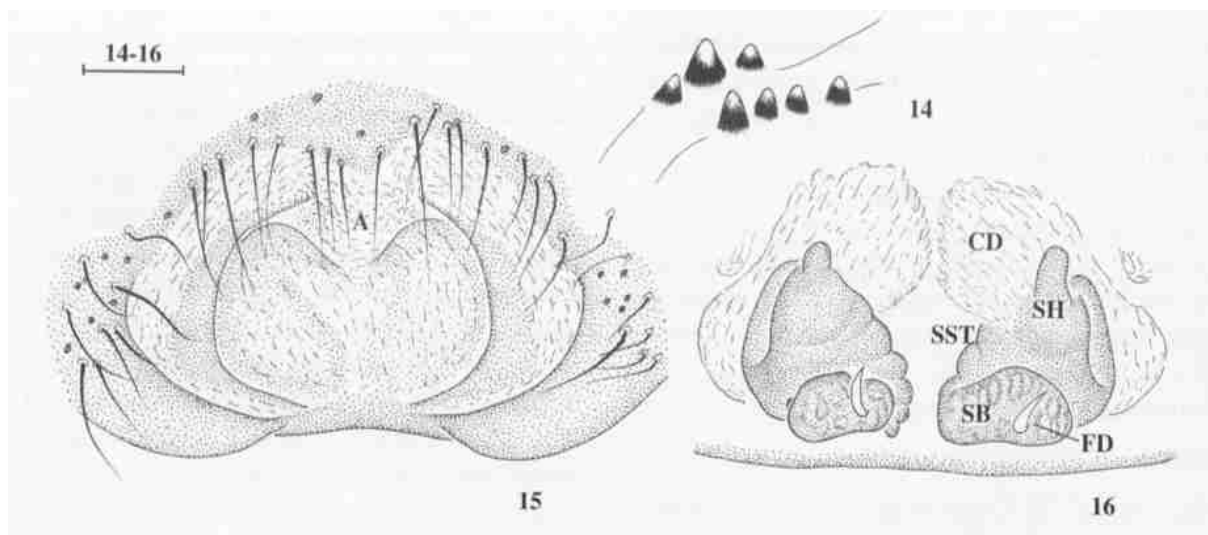
Description of female. Holotype total length 8.9. Carapace 4.4 long, 2.9 wide; abdomen 4.5 long, 3.1 wide. Eyes measurement: AME 0.20; ALE 0.25; PME 0.20; PLE 0.24; AME-AME 0.10; AME-ALE 0.75; ALE-PLE 0.05; PME-PME 0.15; PME-PLE 0.33; Clypeus 0.13. Chelicerae with 3 promarginal teeth and 4 retromarginal (Fig. 14). Leg I longest; leg formula: I, IV, II, III the measurement of legs is as follows: I: 12.7 (3.5+ 4.4+ 3.2+ 1.6); II: 10.9 (3.1+ 3.7+ 2.7+ 1.4); III: 9.6 (2.8+ 3.1+ 2.5+ 1.2); IV: 12.2 (3.5+ 4.0+ 3.5+ 1.2). Chelicerae with 3 promarginal and 4 retromarginal teeth (Fig. 14). Epigynum without epigynal teeth; atrium large; copulatory ducts originated laterally, extending ventrally; spermathecal bases slightly elongated transversally; spermathecal heads situated anteriorly, widely separated (Figs. 15, 16, 26, 27).

Distribution. China (Sichuan) (Fig. 28).

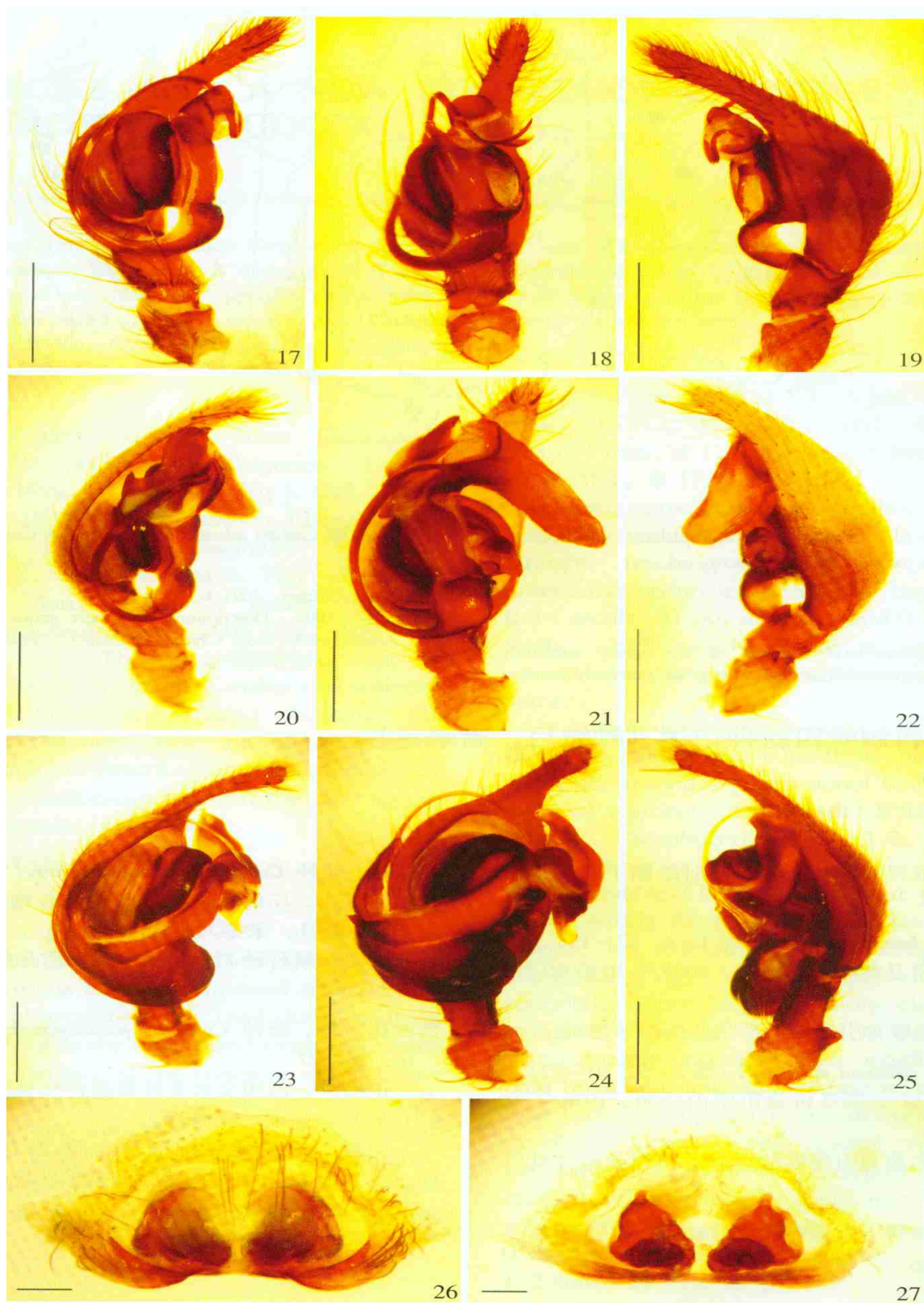
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Figs 10-13. *Codotes processus* sp. nov. 10 Male cheliceral teeth, lateral view. 11 Male palp, prolateral view. 12 Male palp, ventral view. 13 Male palp, retrolateral view. Scale bars: 10= 0.2 mm, 11-13= 1.0 mm.



Figs 14-16. *Coronilla pseudogenata* sp. nov. 14 Female cheliceral teeth, lateral view. 15 Epigynum, ventral view. 16 Vulva, dorsal view. Scale bar= 0.2 mm.



Figs 17-19. *Codotes brevis* sp. nov. 20-22. *Codotes olasseus* sp. nov. 23-25. *Coelotes procerus* sp. nov. 26-27. *Cronilla pseudogenata* sp. nov. 17, 20, 23. Male palp, prolateral view. 18, 21, 24. Male palp, ventral view. 19, 22, 25. Male palp, retrolateral view. 26. Epigynum, ventral view. 27. Vulva, dorsal view. Scale bars: 17-25= 1.0 mm; 26, 27= 0.2 mm.

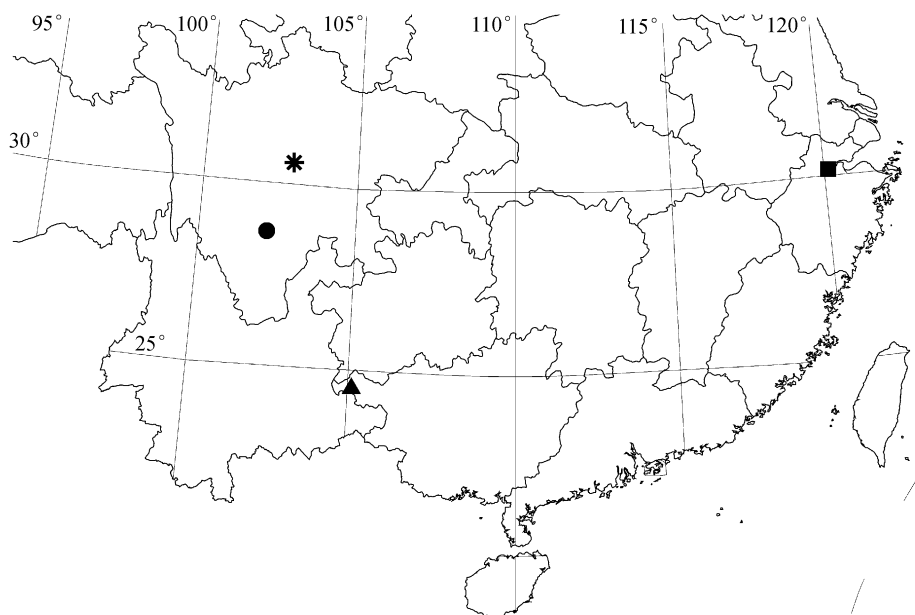


Fig 28. Records of four new codotid spiders. ● *Codotes brevis* sp. nov. ■ *Codotes colosseus* sp. nov. ▲ *Codotes processus* sp. nov. * *Coronilla pseudogenata* sp. nov.

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中国南方隙蛛亚科蜘蛛四新种记述 (蜘蛛目, 暗蛛科)

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摘 要 描述了隙蛛亚科蜘蛛 4 新种, 同时绘制了地理分布图。

短隙蛛, 新种 *Coelotes brevis* sp. nov. (图 1~4, 17~19)

正模 ♂, 四川冕宁县彝海乡彝海子, 2005 年 10 月 20 日, 徐湘、张秀峰采。

词源: 新种的种名取自引导器的形状, 指引导器短。

巨隙蛛, 新种 *Coelotes colosseus* sp. nov. (图 5~9, 20~22)

正模 ♂, 副模 2 ♂, 浙江杭州市中山公园, 1976 年 10 月 14 日, 采集人不详。

词源: 新种的种名取自引导器的形状, 指引导器强壮巨大。

关键词 蜘蛛目, 暗蛛科, 隙蛛亚科, 隙蛛属, 花冠蛛属。

中图分类号 Q959.226

突隙蛛, 新种 *Coelotes processus* sp. nov. (图 10~13, 23~25)

正模 ♂, 广西壮族自治区隆林各族自治县德峨乡, 1998 年 11 月 30 日, 采集人不详。

词源: 新种种名意指插入器和盾片骨片 (Tegular sclerite) 具突起。

伪蕾花冠蛛, 新种 *Coronilla pseudogenata* sp. nov. (图 14~16, 26~27)

正模 ♀, 四川宝兴县蜂桶寨自然保护区大水沟, 2005 年 9 月 26 日, 徐湘、张秀峰采。

词源: 新种种名指新种与蕾形花冠蛛 *Coronilla genata* Wang, 1994 极为相似, 意为似蕾形花冠蛛。